

Claims

What is claimed is:

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1. A hydraulic system, comprising:  
a hydraulic pressure source;  
a hydraulic transformer having an inlet and an outlet, said inlet coupled with said pressure source;  
at least one hydraulic motor; and  
a bypass valve operatively coupling at least one said motor selectively either with said pressure source or said hydraulic transformer outlet, dependent upon an operating characteristic associated with at least one said hydraulic motor.
2. The hydraulic system of claim 1, including a hydraulic load coupled with at least one said hydraulic motor, said bypass valve fluidly coupling at least one said motor selectively either with said pressure source or said hydraulic transformer outlet, dependent upon an operating characteristic associated with said hydraulic load.
3. The hydraulic system of claim 1, at least one said motor including an output shaft, said operating characteristic being one of an output speed and output torque associated with said output shaft.
4. The hydraulic system of claim 1, said bypass valve fluidly coupling said hydraulic transformer inlet with said hydraulic transformer outlet.
5. The hydraulic system of claim 1, said bypass valve being a normally open valve.

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6. The hydraulic system of claim 5, said bypass valve being one of separate from and integral with said hydraulic transformer.

7. The hydraulic system of claim 6, said hydraulic transformer including a bypass port, said bypass valve including said bypass port.

8. A work machine, comprising:

a frame; and

a hydraulic system including:

a hydraulic pressure source;

a hydraulic transformer having an inlet and an outlet, said inlet coupled with said pressure source;

at least one hydraulic motor; and

a bypass valve operatively coupling at least one said motor selectively either with said pressure source or said hydraulic transformer outlet, dependent upon an operating characteristic associated with at least one said hydraulic motor.

9. A hydraulic system, comprising:

a hydraulic pressure source;

a hydraulic transformer having an inlet and an outlet, said inlet coupled with said pressure source; and

a plurality of hydraulic motors, each said hydraulic motor being fluidly coupled in a parallel manner with at least one of said hydraulic transformer outlet and said pressure source, at least two of said hydraulic motors being configured with different operating ranges.

10. The hydraulic system of claim 9, including a bypass valve fluidly coupling at least one said motor selectively either with said pressure

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source or said hydraulic transformer outlet, dependent upon an operating characteristic associated with at least one said hydraulic motor.

11. The hydraulic system of claim 9, one of said plurality of motors being directly coupled with said pressure source and an other of said plurality of motors being directly coupled with a corresponding said hydraulic transformer.

12. The hydraulic system of claim 11, said one motor being configured with a higher efficiency operating range when operating at a higher speed and lower torque, when compared with said other motor.

13. A work machine, comprising:

a frame; and

a hydraulic system including:

a hydraulic pressure source;

a hydraulic transformer having an inlet and an outlet, said inlet coupled with said pressure source; and

a plurality of hydraulic motors, each said hydraulic motor being fluidly coupled in a parallel manner with at least one of said hydraulic transformer outlet and said pressure source, at least two of said hydraulic motors being configured with different operating ranges.

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